

REMARKS

Entry of the foregoing and reexamination and reconsideration of the subject application, as amended, pursuant to and consistent with 37 C.F.R. § 112, are respectfully requested in light of the following remarks.

Claims 16-30 are pending in the application. Claim 1-15 were previously cancelled.

Rejection under 35 U.S.C. §103

1. Claims 16-18 have been rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Fujita et al. (US 3,755,249)

Applicants respectfully submit that these claims are not obvious over Fujita, and that claims 16-18 are allowable.

To establish a *prima facie* case of obviousness, three basic criteria must be met. (MPEP 2143) First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Fujita teaches polyamide compositions comprising a polyamide containing an anti-static agent composed of a polyalkene oxide-added secondary alkylamine of the formula:

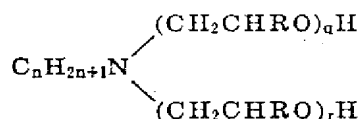


in which R stands for a hydrogen atom or methyl radical,

n stands for a positive integer of not less than 10, and

p stands for a positive integer, preferably a positive integer not less than 10,

and a polyalkene oxide-added tertiary alkylamine of the formula:



in which R and n have the same definitions as given above, and q and r are each a positive integer, preferably $(q + r)$ is a positive integer not less than 15, the mol number of the added polyalkylene oxide groups equalling $(q + r)$,

i. the above positive integers, n , p , q , and r satisfying the relationship below;

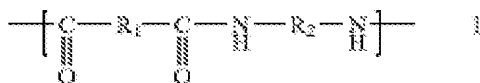
2.5, preferably $2.0 \geq (p+q+r)/2n \geq 0.5$, preferably 0.8, i.e., $(p+q+r)/2n$ is between 0.5 and 2.5 and ii. the secondary alkylamine of (A) above occupying 5 – 50 percent by weight, preferably 15 – 35 percent by weight, of the total of (A) plus (B), and the total of (A) + (B) occupying 1 – 15 percent by weight, preferably 1.5 – 7 percent by weight, of the polyamide.

Fujita also teaches: "The concurrent utilization of the two types of polyalkylene oxide-added alkylamines (A) and (B) as below-specified is essential for the polyamide compositions of this invention." (col. 4, lines 13-16) (Emphasis added)

The repeating units of Fujita are (CH_2CHRO) , where R is H or CH_3 .

Therefore, the repeating units of Fujita are $(\text{CH}_2\text{CH}_2\text{O})$ or $\left(\text{CH}_2 - \overset{\text{CH}_3}{\underset{|}{\text{CH}}} - \text{O} \right)^*$.

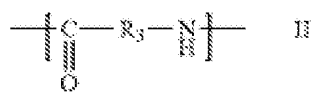
Repeating unit I of the instant claims



requires two carbonyl groups and two secondary amine groups in the repeating unit.

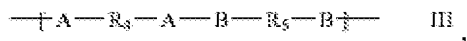
The repeating units in Fujita do not comprise two carbonyl groups and two secondary amine groups in the repeating unit and therefore Fujita does not disclose an additive comprising repeating units of formula (I).

Repeating unit II of the instant claims

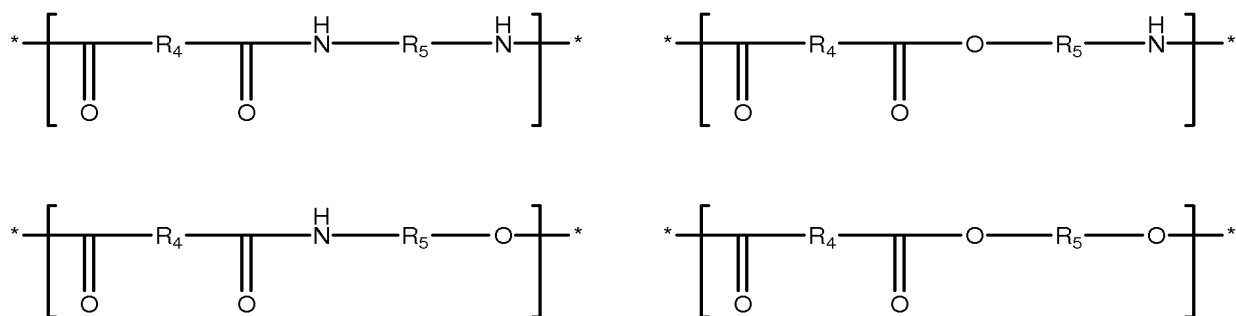


requires a carbonyl group and a secondary amine group in the repeating unit. The repeating units in Fujita do not comprise a carbonyl group and two secondary amine groups in the repeating unit and therefore Fujita does not disclose an additive comprising repeating units of formula (II).

Repeating unit III of the instant claims requires the formula:

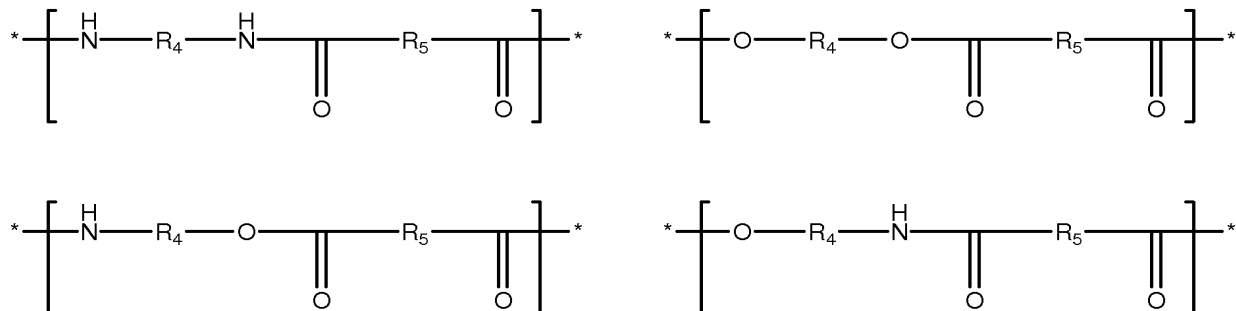


where A and B represent the CO, NH or O groups; when A represents CO, B represents NH or O and vice versa. When A represents CO, the repeating unit of formula III can be:



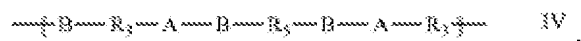
Each of these formulas requires two carbonyl groups in the repeating unit. The repeating units in Fujita do not comprise two carbonyl groups in the repeating unit and therefore Fujita does not disclose an additive comprising repeating units of

formula (III) when A represents CO. When B represents CO, the repeating units of formula III can be:

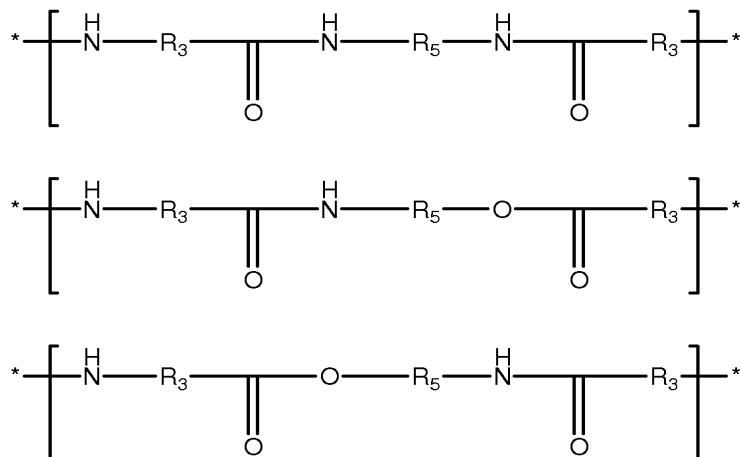


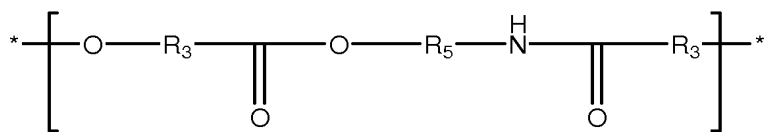
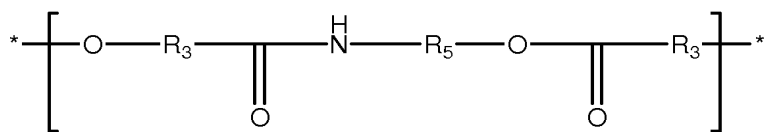
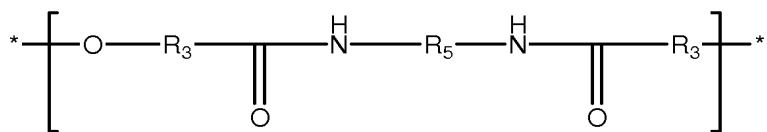
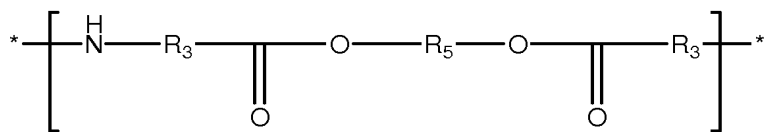
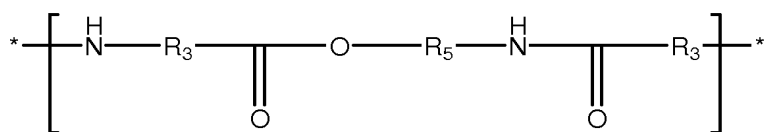
Each of these formulas also requires two carbonyl groups in the repeating unit. The repeating units in Fujita do not comprise two carbonyl groups in the repeating unit and therefore Fujita does not disclose an additive comprising repeating units of formula (III) when B represents CO. Therefore Fujita does not disclose an additive comprising repeating units of formula (III).

Repeating unit IV of the instant claims requires the formula:

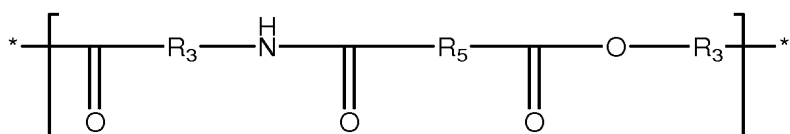
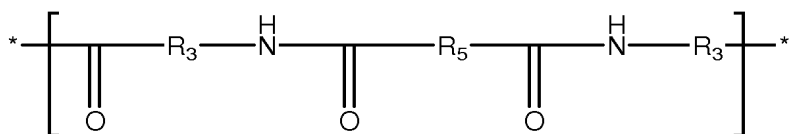


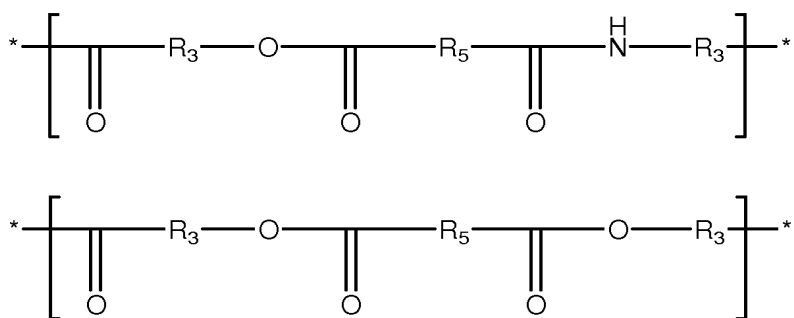
where A and B represent the CO, NH or O groups; when A represents CO, B represents NH or O and vice versa. When A represents CO, the repeating unit of formula III can be:





Each of these formulas also requires two carbonyl groups in the repeating unit. The repeating units in Fujita do not comprise two carbonyl groups in the repeating unit and therefore Fujita does not disclose an additive comprising repeating units of formula IV when A represents CO. When B represents CO, the repeating units of formula IV can be:





Each of these formulas requires three carbonyl groups in the repeating unit. The repeating units in Fujita do not comprise three carbonyl groups in the repeating unit and therefore Fujita does not disclose an additive comprising repeating units of formula IV when B represents CO. Therefore Fujita does not disclose an additive comprising repeating units of formula (IV).

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. There is no suggestion or motivation in Fujita to modify Fujita to obtain the process of the applicants' invention. There is no suggestion or motivation in Fujita to modify Fujita by replacing the additive of Fujita which requires a specific family of secondary amines and a specific family of tertiary amines, where both the secondary and tertiary amines have repeating units which

are (CH₂CH₂O) or $* \left(\text{CH}_2 \text{---} \overset{\text{CH}_3}{\underset{|}{\text{CH}}} \text{---} \text{O} \right) *$ with the matrix and/or additives

comprising the repeating units required by the instant claims. There is also no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to require that the polymeric

matrix comprises at least one of the repeat units I or II and at least one of the repeat units III or IV when the additive is absent or does not comprise repeat units of formulae III or IV. Therefore, there is no suggestion or motivation, either in the cited reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference to obtain the invention of the instant application.

To establish a *prima facie* case of obviousness, there must be a reasonable expectation of success. Fujita teaches: "The concurrent utilization of the two types of polyalkylene oxide-added alkylamines (A) and (B) as below-specified is essential for the polyamide compositions of this invention." (Emphasis added) The Office Action is silent the on the expectation of success in replacing the combination of the specific secondary alkylamines and the specific tertiary amines as an additive as taught by Fujita with a poly(oxyalkylene)amide or a polymeric matrix comprising the repeating units recited by the instant claims. One of ordinary skill in the art would recognize that there are considerable differences between the structures of the repeating units of Fujita and those of the instant claims and that such structural differences result in compounds with different properties. One of ordinary skill in the art would recognize that there must be some teaching regarding the replacement or substitution of elements that are taught to be essential in the prior art for such a person to have a reasonable expectation of success in developing the claimed methods. In addition, there would not have been a reasonable expectation of success in requiring that the polymeric matrix comprise at least one of the repeat units I or II and at least one of the repeat units III or IV when the additive is absent or does not comprise repeat units of formulae III or IV. Therefore there is no reasonable

expectation of success in producing the applicants' invention based on the teachings in the cited prior art.

To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. As shown above, Fujita does not teach or suggest using a poly(oxyalkylene)amide or a polymeric additive comprising repeat units corresponding to the general formulae I - IV, as recited by the instant claims. There is no also no suggestion or motivation in Fujita to modify the process such that the polymeric matrix comprises at least one of the repeat units I or II and at least one of the repeat units III or IV when the additive is absent or does not comprise repeat units of formulae III or IV. Therefore, the prior art reference does not teach or suggest all the claim limitations.

Applicants respectfully submit that these claims are not obvious over Fujita, and that claims 16-18 are allowable. Applicant therefore requests that this rejection be withdrawn.

2. Claims 19, 20 and 22-30 have been rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Fujita et al. (US 3,755,249) as applied to claim 16 above and further in view of La Grande et al. (US 2004/0242788).

Applicants respectfully submit that these claims are not obvious over Fujita in view of La Grande, and that claims 19, 20 and 22-30 are allowable.

The teachings of Fujita have been described above.

La Grande relates to a thermoplastic polymer comprising at least one polyalkylene oxide block and its application in the field of yarns, fibres and filaments. The processes used in La Grande produce yarns by standard spinning processes,

where spinning filaments are combined to produce a yarn before they are eventually drawn. [0153], [0154]. The filaments are yarns are formed on a bobbin. La Grande does not disclose forming the filaments into sheets just after the spinnerets by feeding the filaments to a pneumatic attenuation device and a stage in which the filaments obtained are formed into a sheet. As disclosed in the specification of the instant application, the effect of the electrostatic charges need to be overcome very quickly and the polymer must have a high electric conductivity to rapidly decrease the electrostatic charges. (page 3, line 21 - page 4, line 5)

Claims 19, 20 and 22-30 depend from claim 16, which is not obvious over Fujita as discussed above.

La Grande does not overcome the deficiencies of Fujita with regard to claim 16, from which these claims depend. Claims 19, 20 and 22-30 are not obvious over these references for the same reasons that claim 16 is not obvious over Fujita.

Applicants respectfully submit that these claims are not obvious over Fujita in view of La Grande, and that claims 19, 20 and 22-30 are allowable. Applicant therefore requests that this rejection be withdrawn.

3. Claim 21 has been rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Fujita et al. (US 3,755,249) in view of La Grande et al. (US 2004/0242788) as applied to claim 20 and further in view of Glück (US 5,959,069).

Applicants respectfully submit that claim 21 is not obvious over Fujita in view of La Grande and further in view of Glück and that claim 21 is allowable.

The teachings of Fujita and La Grande have been described above.

Glück relates to H-shaped polymers.

Claim 21 depends from claim 16, which is not obvious over Fujita and La Grande as discussed above.

Gluck does not overcome the deficiencies of Fujita and La Grande with regard to claim 16, from which claim 21 depends. Claim 21 is not obvious over these references for the same reasons that claim 16 is not obvious over Fujita.

Applicants respectfully submit that claim 21 is not obvious over Fujita in view of La Grande and Glück, and that claim 21 is allowable. Applicant therefore requests that this rejection be withdrawn.

From the foregoing, Applicants earnestly solicit further and favorable action in the form of a Notice of Allowance.

If there are any questions concerning this paper or the application in general, Applicants invite the Examiner to telephone the undersigned at the Examiner's earliest convenience.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: December 30, 2011

By: /Gary D. Mangels, Ph.D./
Gary D. Mangels, Ph.D.
Registration No. 55424

Customer No. 21839
703 836 6620